

REMARKS

Claims 4, 6-9 and 11 have been rejected under 35 U.S.C. §102(b) as being anticipated by Green '773. This rejection is respectfully traversed.

These claims, which have been amended merely to recite more specifically the inherent aspects of the invention, now recite in various ways “a tip having tapered outer walls converging to a blunt end for dissecting tissue,” and “a locking mechanism, positioned near the distal end of the cannula at a location recessed from the tip disposed on the distal end of the cannula; and the dilating element further comprising a mating lock to mate near the distal end with the locking mechanism for positioning the dilating element on the cannula at a location thereon recessed from the distal end thereof”, and “said locking mechanism further comprising a length of screw threads positioned on the surface of the cannula, and the mating lock of the dilating element further comprising a threaded bore hole for fixably coupling the dilating element to the length of screw threads”.

In addition, these claims specifically recite “a dilating element, of a population of dilating elements having different maximum outer dimensions, disposed on the cannula at a location thereon intermediate the distal and proximal ends thereof”, and “the locking mechanism of the cannula being lockable with selected ones of the population of dilating elements of differing maximum dimensions for expanding the surgical cavity to differing dimensions”, and “a solid dilating element of fixed outer dimension disposed on the cannula at a location

thereon intermediate the distal and proximal ends thereof; the outer dimension of the dilating element being greater than the dimension of the distal end of the cannula-for dilating dissected tissue to expand the surgical cavity therein”, and “the tip and the dilating element forming a single unit with a proximal threaded end of the unit mating with compatible threads disposed on the distal end of the cannula”.

These aspects of the claimed invention are not disclosed or even suggested by Green ‘773 which discloses a tissue gripping device about a cannula or trocar that is deficient of disclosure of the specific aspects claimed by applicant.

Specifically, the trocar or cannula of the reference does not include a tip as claimed for dissecting tissue, and does not include a locking device at the *distal* end of the cannula for mating with a tissue dilating element in the manner as claimed. At best, this reference discloses a hollow trocar with articulating arms for *gripping* tissue (rather than for advancing through tissue to dissect and dilate a channel through tissue). And, contrary to the Examiner’s analysis of this reference, any locking device (26, 28) is disposed near the *proximal* end of the trocar for securing the articulated arms in one or other tissue-gripping configurations rather than for securing a tissue-dilating device to the distal end of the cannula, as claimed by applicant. These deficiencies of disclosure thus fail to establish even a *prima facie* basis from which a proper determination of anticipation can be made. It is therefore respectfully submitted that amended claims 4, 6-9 are patentably distinguishable over the cited art.

Claim 10 has been rejected under 35 U.S.C. §102(b) as being anticipated by Haaga '502. This rejection is respectfully traversed.

This claim, which has been amended merely to recite inherent aspects of the invention, specifically recites “an expansively resilient dilating element attached to the cannula at a location thereon intermediate the distal and proximal ends thereof and having an outer dimension greater than the dimension of the distal end of the cannula for dilating tissue in a surgical cavity formed in tissue”, and “a sheath slidably retained on the cannula, and having a distal end disposed upon the dilating element in a first position and recessed from the dilating element in a second position, for confining the outer dimension of the dilating element within the sheath in the first position and for releasing resilient expansion of the outer dimension of the dilating element responsive to the sheath being in the second position”.

These aspects of the claimed invention are not disclosed or even suggested by Haaga '502 which is understood to disclose sealing an incision or puncture against loss of fluid. Any sheath (36) identified by the Examiner as having expansive resilience is understood to serve as a seal in a puncture or incision and is not attached to the supporting cannula in the two configurations of confined or released as determined by the positions of the sliding sheath in the manner as claimed by applicant. Instead, such resilient sheath is understood to be ejected from the supporting sheath for deposit as a seal or plug in the puncture. It is therefore respectfully submitted that the distinctive disclosure of this reference is

deficient of the elements claimed, and that this reference therefore fails to anticipate claim 10 which is patentably distinguishable over Haaga '502.

Claims 12-14 and 20-21 have been rejected under 35 U.S.C. §102(e) as being anticipated by Goodwin et al. '061. This rejection is respectfully traversed.

These claims have been amended merely to recite inherent aspects of the invention, and now variously specifically define “simultaneously expanding the surgical cavity in a lateral direction responsive to advancing the portion of the tissue dissector of expanded dimension through the surgical cavity in dissected tissue”, and “advancing the device to dissect a channel through tissue along the course of the vessel and concurrently visualizing the tissue and dilating the dissected tissue responsive to the advancement of the device through tissue to expand the channel”. In addition, these claims recite “simultaneously expanding the surgical cavity in a lateral direction responsive to the portion of the tissue dissector of expanded dimension, as the tissue dissector is advanced through tissue along the vessel”, and “advancing the device to dissect tissue and concurrently visualizing the tissue and dilating the dissected tissue responsive to the advancement of the device through the tissue”.

These claimed aspects of the invention are not disclosed or even suggested by Goodwin et al. '061 which is directed to a trocar and obturator assembly that may receive an endoscope within the hollow bore. This device is described as being suited for penetrating into body cavities and has shearing or tissue-separating

blades 18 disposed on the distal tip to facilitate such penetration. There is no disclosure here of dissecting tissue in a channel along a vessel of interest and simultaneously dilating the dissected tissue to expand the channel in response to advancement of the device through the tissue to be dissected and dilated, in a manner as claimed by applicant. At best, this reference describes that penetration of the tip 17 into a body cavity is assisted by endoscopic visualization through the tip, but this reference is not understood to disclose also simultaneously dilating the dissected tissue in response to advancement of the device along the course of a vessel of interest in order to form a cavity or channel in the manner as claimed by applicant. It is therefore respectfully submitted that claims 12-14 and 20, 21 cannot be anticipated by, but instead are patentably distinguishable over, Goodwin et al. '061.

Claims 22-23 have been rejected under 35 U.S.C. §102(e) as being anticipated by Sierocuk et al. '382. This rejection is respectfully traversed.

These claims variously recite “a singular hand grip securely supported on the attachment in skewed orientation with respect to the dissection device”, and “a hand grip supported on the attachment in an orientation including a component eccentric the elongated axis”, and “an attachment to the dissection device; and a hand grip supported on the attachment”. In addition, the dependent claims are further restricted by such recitations as “the tubular dissection device includes a proximal end disposed to provide access to a lumen of the tubular dissection device

through the attachment”, and “the hand grip is formed integrally with the attachment in skewed orientation to said portion thereof”.

These aspects of the claimed invention are not disclosed or even suggested by Sierocuk et al. '382 which is understood to disclose a balloon dissector, but without a handle disposed in skewed and/or eccentric orientation relative to the tubular dissector in a manner as claimed by applicant. Specifically, the tissue dissector of this reference appears not to include any more eccentric or skewed an 'attachment ' to serve as a handle than the conventional stop-lock valve 18 which provides flow control of pressurized fluid, but which is not configured as a handle in any manner resembling the apparatus as claimed by applicant. Contrary to the Examiner's analysis of this reference, a component positioned askew the tubular body 17 is not a 'handle' but instead, as illustrated in Figures 1 and 2, is a partial segment of tubing shown, with arrow pointing inward in Figure 2, receiving a flow of fluid under pressure. It is therefore respectfully submitted that claims 22-33 are not anticipated by, but instead are patentably distinguishable over, the cited art.

Reconsideration and allowance of all pending claims over the cited art
(including Ianniruberto '890 and Flom '062 and Chin '183 and Avellanet '236,
cited but not applied) are solicited.

Respectfully submitted,
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